1600

RAW SEQUENCE LISTING   DATE: 10/15/2001
PATENT APPLICATION: US/09/486,625A   TIME: 15:35:29

Input Set : **A:\UPAP0287.ST25.txt**
Output Set: **N:\CRF3\10152001\I486625A.raw**

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 3 <110> APPLICANT: Ayyavoo, Velpandi
 4         Nagashunmugam, Thandavarayan
 5         David B., Weiner
 7 <120> TITLE OF INVENTION: Attenuated VIF DNA Immunization Cassettes For Genetic
Vaccines
 9 <130> FILE REFERENCE: UPAP-0287
11 <140> CURRENT APPLICATION NUMBER: 09/486,625A
12 <141> CURRENT FILING DATE: 2000-09-13
14 <150> PRIOR APPLICATION NUMBER: 60/059,283
15 <151> PRIOR FILING DATE: 1997-09-18
17 <150> PRIOR APPLICATION NUMBER: 60/060,172
18 <151> PRIOR FILING DATE: 1997-09-26
20 <160> NUMBER OF SEQ ID NOS: 46
22 <170> SOFTWARE: PatentIn version 3.1
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30 <223> OTHER INFORMATION: Novel Sequence
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39              20                  25                  30
42 Lys Lys Ala Arg Trp Phe Tyr Arg His His Tyr Glu Ser Pro His Pro
43          35                  40                  45
46 Lys Val Ser Ser Glu Val His Ile Pro Leu Gly Asp Ala Arg Leu Glu
47      50                  55                  60
50 Thr Thr Thr Tyr Trp Gly Leu His Gly Glu Arg Asp Trp His Leu Gly
51 65                  70                  75                  80
54 Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr Gln Val
55                  85                  90                  95
58 Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe Asp Cys
59              100                 105                 110
62 Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly Tyr Arg Val Ser
63          115                 120                 125
66 Pro Arg Cys Glu Tyr Gln Ala Gly His Asn Lys Val Gly Ser Leu Gln
67      130                 135                 140
70 Tyr Leu Ala Leu Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys Pro Pro
71 145                 150                 155                 160
74 Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro Gln
75              165                 170                 175
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83 <211> LENGTH: 26
84 <212> TYPE: DNA
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121             20                  25                  30
124 Lys Ala Arg Glu Trp Phe Tyr His His Tyr Gln Ser Pro His Pro Lys
125         35                  40                  45
128 Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu Glu Ile
129     50                  55                  60
132 Thr Ser Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His Leu Gly
133 65                  70                  75                  80
136 Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr His Val
137             85                  90                  95
140 Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe Asp Cys
141             100                 105                 110
144 Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg Val Ser
145         115                 120                 125
148 Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser Leu Gln
149     130                 135                 140
152 Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys Pro Pro
153 145                 150                 155                 160
156 Leu Ala Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys Pro Gln
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179   20   25   30
182 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
183   35   40   45
186 Pro Arg Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
187   50   55   60
190 Glu Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
191 65   70   75   80
194 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
195   85   90   95
198 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
199   100   105   110
202 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
203   115   120   125
206 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
207   130   135   140
210 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
211 145   150   155   160
214 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
215   165   170   175
218 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
219   180   185   190
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237   20   25   30
240 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
241   35   40   45
244 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
245   50   55   60
248 Glu Thr Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
249 65   70   75   80
252 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
253   85   90   95
256 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
257   100   105   110
260 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
261   115   120   125

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264 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
265     130             135             140
268 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
269 145             150             155             160
272 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
273             165             170             175
276 Pro Gln Lys Thr Lys Gly His Arg Gly Ser His Thr Met Asn Gly His
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294 Arg Ile Arg Thr Trp Asn Ser Leu Val Thr Tyr His Met Tyr Arg Ser
295             20             25             30
298 Gln Lys Ala Arg Glu Trp Phe Asn Arg His His Tyr His Ser Pro His
299             35             40             45
302 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
303     50             55             60
306 Ala Ile Pro Thr Phe Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
307 65             70             75             80
310 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
311             85             90             95
314 Gln Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
315             100             105             110
318 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
319             115             120             125
322 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
323     130             135             140
326 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
327 145             150             155             160
330 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
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339 <211> LENGTH: 192
340 <212> TYPE: PRT
341 <213> ORGANISM: Artificial Sequence
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349 1             5             10             15
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353              20                25                30
356 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
357          35                40                45
360 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
361      50                55                60
364 Glu Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
365 65                70                75                80
368 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
369              85                90                95
372 His Val Asp Pro Asp Leu Ala Asp His Leu Ile His Leu Cys Tyr Phe
373          100               105               110
376 Asp Cys Leu Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
377          115               120               125
380 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
381      130               135               140
384 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
385 145               150               155               160
388 Pro Pro Leu Pro Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
389              165               170               175
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393              180               185               190
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411              20                25                30
414 Lys Lys Ala Arg Glu Trp Phe Tyr Arg His His Tyr Gln Ser Pro His
415          35                40                45
418 Pro Lys Val Ser Ser Glu Val His Ile Pro Leu Glu Asp Ala Arg Leu
419      50                55                60
422 Val Ile Thr Thr Tyr Trp Gly Leu His Thr Gly Glu Arg Asp Trp His
423 65                70                75                80
426 Leu Gly Gln Gly Val Ser Ile Glu Trp Arg Lys Arg Arg Tyr Ser Thr
427              85                90                95
430 His Val Asp Pro Asp Leu Ala Asp Gln Leu Ile His Leu Tyr Tyr Phe
431          100               105               110
434 Asp Cys Phe Ser Glu Ser Ala Ile Arg Lys Ala Ile Leu Gly His Arg
435          115               120               125
438 Val Ser Pro Arg Cys Glu Tyr Arg Ala Gly His Ser Lys Val Gly Ser
439      130               135               140
442 Leu Gln Tyr Leu Ala Ile Ala Ala Leu Ile Thr Pro Lys Lys Ile Lys
443 145               150               155               160
446 Pro Pro Leu Ala Ser Val Arg Lys Leu Thr Glu Asp Arg Trp Asn Lys
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